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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/895,950	07/17/97	WINTER A	HOE-90/F-333

IM22/0315

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EXAMINER	
TESKIN,F	
ART UNIT	**PAPER NUMBER**
1713	18

DATE MAILED: 03/15/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 08/895,950	Applicant(s) Winter, et al.
	Examiner Fred Teskin	Group Art Unit 1713

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three (3)* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-15 and 19-24* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1, 2, 4-15, and 19-24* is/are rejected.

☒ Claim(s) *3* is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☒ received in Application No. (Series Code/Serial Number) *07/789,361*.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *2*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1. This reissue application is a voluntary divisional of parent application no. 08/324,260, filed October 17, 1994, which seeks reissue of U.S. Patent no. 5,276,208, issued January 4, 1994.

2. The preliminary amendment resubmitted September 17, 1998, has been entered in full. Claims 1-15 and 19-24 are currently pending and under examination.

3. This reissue application was filed without the required offer to surrender the original patent or, if the original is lost or inaccessible, an affidavit or declaration to that effect. The original patent, or an affidavit or declaration as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 4-15, 19 and 20 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Japanese 62-121707 ("Mitsui"), alone or with reference to *JACS* (1967) 89(23) 5868-5876 or applicants' acknowledgements as discussed *infra*.

The rejected claims are drawn to metallocene compounds containing ligands of 2-substituted indenyl derivatives wherein the six-membered fused rings ("rings A" in claim 1) are either saturated or aromatic and wherein the indenyl derivatives may be further substituted at one or more of ring positions three to seven.

Mitsui discloses a metallocene compound upon which said claims are readable, viz., ethylene bis(2,3-dimethyl-1-indenyl)zirconium

dichloride (see the Abstract, second column). The disclosed compound is a member of a genus which appears sufficiently small (7 listed metallocenes) to place the claimed species (wherein "ring A" is aromatic) in possession of the public as in *In re Schaumann*, 197 USPQ 5 (CCPA 1978), and the species would have been obvious even if the genus were not sufficiently small to justify a rejection under § 102.

To the extent that Mitsui does not provide explicit disclosure on how to make ethylene bis(2,3-dimethyl-1-indenyl)zirconium dichloride, the *JACS* article is relied upon to show that methods for making 2-indenes are well known in the art (see in particular page 5873, first full paragraph of the first column and page 5876, top of second column, where the synthesis of 2-methylindene from the acetate of bicyclo[4.2.1]nonatriene is reported). Preparation of the analogous 2,3-disubsituted ligand of Mitsui by applying this known procedure to the correspondingly substituted acetate precursor is not seen to require knowledge beyond that of the ordinarily skilled chemist.

In addition, it is noted that applicants have acknowledged that the bridging units required for synthesis of the indenyl-type ligands are generally commercially available and the procedure for synthesizing the indene derivatives is analogous to procedures published in various literature references (specification, col. 6,

lines 34-44). Where, as here, one of ordinary skill in the art could have combined a publication's description of the invention with his own knowledge to make the claimed invention, public possession of the claimed invention has been held to be effected, *In re LeGrice*, 133 USPQ 365, 373-374 (CCPA 1962).

7. Claims 21-24 are rejected under 35 U.S.C. § 103(a) as unpatentable over Japanese 62-121707 ("Mitsui"), alone or with reference to *JACS* (1967) 89(23) 5868-5876 or applicants' acknowledgements as applied in the preceding rejection.

Claims 21-22 are drawn to catalyst compositions comprising a compound of claim 19 and a cocatalyst, particularly an aluminxoane. Claims 23-24 are drawn to a process for polymerizing an olefin monomer in the presence of the catalyst compositions of claims 21-22.

Mitsui exemplifies (Abstract, Example) olefin polymerization in the presence of an catalyst combination which differs from the rejected claims only in the use of a zirconocene compound containing a ligand of an unsubstituted indenyl derivative (bis-tetrahydro-4,5,6,7-indenyl), instead of a 2-substituted indenyl derivative as claimed.

However, as noted in the preceding rejection, Mitsui mentions ethylene bis(2,3-dimethyl-1-indenyl)zirconium dichloride in a list

of seven suitable metallocene compounds and thereby implicitly teaches the equivalency of compounds conforming to claim formula (I).

Given the implied equivalence of ethylene bis(2,3-dimethyl-1-indenyl)zirconium dichloride to zirconocene species containing unsubstituted indenyl ligands and the very close chemical and structural similarity of these metallocenes, one would have reasonably expected the former to exhibit comparable efficacy when combined with an aluminoxane cocatalyst. Thus one of ordinary skill in the art, motivated by a reasonable expectation of equivalent performance, would have found it obvious to modify the process of Mitsui by utilizing a combination of ethylene bis(2,3-dimethyl-1-indenyl)zirconium dichloride and an aluminoxane to effect olefin polymerization, and thereby arrive at the claimed invention.

8. Claim 3 is objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claim.

9. Applicant is notified that any subsequent amendment to the specification and/or claims must comply with 37 C.F.R. § 1.121(e).

10. Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (703) 308-2456.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (703) 308-2450. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

FRED TESKIN
PATENT EXAMINER
ART UNIT ~~155~~ 1713

FMTeskin/03-07-00